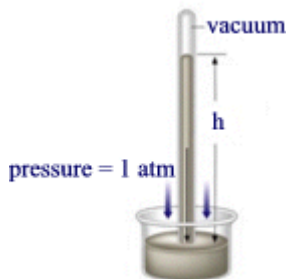


Name _____ Period _____

Skill 33.01 Problem 1

What is the height, h , of the column of mercury in the figure?



How would the height of the mercury in the barometer change

- (a) On Mount Rainier?
- (b) 66 feet below the surface of the ocean?

Skill 33.02 Problem 1

The atmospheric pressure in Denver, Colorado, on the average is 0.830 atm. Express this pressure in

- (a) mm Hg
- (b) torr

If the pressure reading is given as 273 mm Hg, what would this be in atmospheres?

If the pressure reading is given as 2.1 atm, what would this be in torr?

Skill 33.03 Problem 1

Which of the following indicate STP conditions,

- (a) 273 K and 760 mm Hg
- (b) 0 K and 1 torr
- (c) 0°C and 760 torr
- (d) 273 K and 760 torr

Name _____ Period _____

Skill 33.04 Problem 1

A sample of oxygen gas collected in the laboratory occupies a volume of 150 mL when its pressure is 720 mm Hg. What volume will the gas occupy at a pressure of 750 mm Hg if the temperature remains constant?

Skill 33.05 Problem 1

A sample of neon gas occupies a volume of 752 mL at 0°C. What volume will the gas occupy if the temperature is doubled?

Skill 33.06 Problem 1

The gaseous contents in an aerosol can are under a pressure of 3.00 atm at 25°C. Directions on the can caution the user to keep the can in a place where the temperature does not exceed 52°C. What would the pressure of the gas in the aerosol can be at 52°C?

Name _____ Period _____

Skill 33.07 Problem 1

The volume of a gas is 27.5 mL at 22.0°C and 740. mm Hg pressure. What will be its volume at 15°C and 755 mm Hg pressure?

Skill 33.07 Problem 2

A helium-filled balloon has a volume of 30.0 L at 25°C and 1.00 atm. What volume will it have at 0.900 atm and 15°C?

Skill 33.07 Problem 3

A 700. mL gas sample at STP (STP means standard temperature and pressure: temperature = 273 K and $P = 1$ atm) is compressed to a volume of 200. mL, and the temperature is increased to 30.0°C. What is the new pressure of the gas?